

## SEQUENCE LISTING

<110> Northwest Biotherapeutics, -Inc. <120> METHODS FOR THE DIAGNOSIS AND TREATMENT OF METASTATIC PROSTATE TUMORS <130> 8511-025-228 <140> PCT/US99/08079 <141> 1999-04-13 <160> 16 <170> PatentIn Ver. 2.0 <210> 1 <211> 4450 <212> DNA <213> Homo sapiens <220> <221> CDS <222> (22)..(3915) <400> 1 acccacgogo agoggoogga g atg cag ogg ggo goo gog otg tgo otg oga 51 Met Gln Arg Gly Ala Ala Leu Cys Leu Arg ctg tgg ctc tgc ctg gga ctc ctg gac ggc ctg gtg agt gac tac tcc Leu Trp Leu Cys Leu Gly Leu Leu Asp Gly Leu Val Ser Asp Tyr Ser 20 atg acc ccc ccg acc ttg aac atc acg gag gag tca cac gtc atc gac 147 Met Thr Pro Pro Thr Leu Asn Ile Thr Glu Glu Ser His Val Ile Asp 30 acc ggt gac agc ctg tcc atc tcc tgc agg gga cag cac ccc ctc gag 195 Thr Gly Asp Ser Leu Ser Ile Ser Cys Arg Gly Gln His Pro Leu Glu 45 tgg get tgg cca gga get cag gag geg cca gec ace gga gae aag gae 243 Trp Ala Trp Pro Gly Ala Gln Glu Ala Pro Ala Thr Gly Asp Lys Asp 60 age gag gac acg ggg gtg gtg cga gac tgc gag ggc aca gac gcc agg Ser Glu Asp Thr Gly Val Val Arg Asp Cys Glu Gly Thr Asp Ala Arg 75 ccc tac tgc aag gtg ttg ctg ctg cac gag gta cat gcc aac gac aca 339 Pro Tyr Cys Lys Val Leu Leu His Glu Val His Ala Asn Asp Thr 100 ggc agc tac gtc tgc tac tac aag tac atc aag gca cgc atc gag ggc 387 Gly Ser Tyr Val Cys Tyr Tyr Lys Tyr Ile Lys Ala Arg Ile Glu Gly

115

120

110

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					ctc Leu											627			
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Pro	Phe 220	Leu	Val	His	atc Ile	Thr 225	Gly	Asn	Glu	Leu	Tyr 230	Asp	Ile	Gln	Leu	723			•
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								•			•						
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	ctg Leu 620															1923	
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	ttg Leu															2115	
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	aag Lys															2259	
	tgc Cys															2307	
	gcc Ala															2355	
	gtc Val 780															2403	
	atc Ile															2451	

795					800					805					810			
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						tac Tyr										2547	-	
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cgg Arg						agc Ser										2979		
aag Lys												Gln				3027		
gac Asp	Leu					Leu					Leu					3075		
Phe					Gly	atg Met L025				Ala						3123		

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Gly Ala Glu Thr Arg Gly	Ser Ser Arg Met Lys	Thr Phe Glu Glu Phe	
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Thr 145	Leu	Leu	Val	Asn	Arg 150	Lys	Asp	Ala	Met	Trp 155	Val	Pro	Cys	Leu	Val 160
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Thr	Trp 210	Gly	Asp	Gln	Asp	Phe 215	Leu	Ser	Asn	Pro	Phe 220	Leu	Val	His	Ile
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Tyr	Lys 370	Asp	Gly	Lys	Ala	Leu 375	Ser	Gly	Arg	His	Ser 380	Pro	His	Ala	Leu
Val	Leu	Lys	Glu	Val	Thr	Glu	Ala	Ser	Thr	Gly	Thr	Tyr	Thr	Leu	Ala

Leu Trp Asn Ser Ala Ala Gly Leu Arg Arg Asn Ile Ser Leu Glu Leu

- Val Val Asn Val Pro Pro Gln Ile His Glu Lys Glu Ala Ser Ser Pro
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- Ser Ile Tyr Ser Arg His Ser Arg Gln Ala Leu Thr Cys Thr Ala Tyr 435 440 445
- Gly Val Pro Leu Pro Leu Ser Ile Gln Trp His Trp Arg Pro Trp Thr 450 455 460
- Pro Cys Lys Met Phe Ala Gln Arg Ser Leu Arg Arg Arg Gln Gln Gln 465 470 480
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- Gly Lys Asn Lys Thr Val Ser Lys Leu Val Ile Gln Asn Ala Asn Val 515 520 525
- Ser Ala Met Tyr Lys Cys Val Val Ser Asn Lys Val Gly Gln Asp Glu 530 535 540
- Arg Leu Ile Tyr Phe Tyr Val Thr Thr Ile Pro Asp Gly Phe Thr Ile 545 550 555 560
- Glu Ser Lys Pro Ser Glu Glu Leu Leu Glu Gly Gln Pro Val Leu Leu 565 570 575
- Ser Cys Gln Ala Asp Ser Tyr Lys Tyr Glu His Leu Arg Trp Tyr Arg 580 585 590
- Leu Asn Leu Ser Thr Leu His Asp Ala His Gly Asn Pro Leu Leu 595 600 605
- Asp Cys Lys Asn Val His Leu Phe Ala Thr Pro Leu Ala Ala Ser Leu 610 620
- Glu Glu Val Ala Pro Gly Ala Arg His Ala Thr Leu Ser Leu Ser Ile 625 630 635 640
- Pro Arg Val Ala Pro Glu His Glu Gly His Tyr Val Cys Glu Val Gln 645 650 655
- Asp Arg Arg Ser His Asp Lys His Cys His Lys Lys Tyr Leu Ser Val 660 665 670
- Gln Ala Leu Glu Ala Pro Arg Leu Thr Gln Asn Leu Thr Asp Leu Leu 675 680 685
- Val Asn Val Ser Asp Ser Leu Glu Met Gln Cys Leu Val Ala Gly Ala 690 695 700
- His Ala Pro Ser Ile Val Trp Tyr Lys Asp Glu Arg Leu Leu Glu Glu 705 710 715 720

- Lys Ser Gly Val Asp Leu Ala Asp Ser Asn Gln Lys Leu Ser Ile Gln 725 730 735
- Arg Val Arg Glu Glu Asp Ala Gly Pro Tyr Leu Cys Ser Val Cys Arg
  740 745 750
- Pro Lys Gly Cys Val Asn Ser Ser Ala Ser Val Ala Val Glu Gly Ser 755 760 765
- Glu Asp Lys Gly Ser Met Glu Ile Val Ile Leu Val Gly Thr Gly Val 770 780
- Ile Ala Val Phe Phe Trp Val Leu Leu Leu Leu Ile Phe Cys Asn Met 785 790 795 800
- Arg Arg Pro Ala His Ala Asp Ile Lys Thr Gly Tyr Leu Ser Ile Ile 805 810 815
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- Tyr Asp Ala Ser Gln Trp Glu Phe Pro Arg Glu Arg Leu His Leu Gly 835 840 845
- Arg Val Leu Gly Tyr Gly Ala Phe Gly Lys Val Val Glu Ala Ser Ala 850 855 860
- Phe Gly Ile His Lys Gly Ser Ser Cys Asp Thr Val Ala Val Lys Met 865 870 875 880
- Leu Lys Glu Gly Ala Thr Ala Ser Glu Gln Arg Ala Leu Met Ser Glu 885 890 895
- Leu Lys Ile Leu Ile His Ile Gly Asn His Leu Asn Val Val Asn Leu 900 905 910
- Leu Gly Ala Cys Thr Lys Pro Gln Gly Pro Leu Met Val Ile Val Glu 915 920 925
- Phe Cys Lys Tyr Gly Asn Leu Ser Asn Phe Leu Arg Ala Lys Arg Asp 930 935 940
- Ala Phe Ser Pro Cys Ala Glu Lys Ser Pro Glu Gln Arg Gly Arg Phe 945 950 955 960
- Arg Ala Met Val Glu Leu Ala Arg Leu Asp Arg Arg Pro Gly Ser 965 970 975
- Ser Asp Arg Val Leu Phe Ala Arg Phe Ser Lys Thr Glu Gly Gly Ala 980 985 990
- Arg Arg Ala Ser Pro Asp Gln Glu Ala Glu Asp Leu Trp Leu Ser Pro 995 1000 1005
- Leu Thr Met Glu Asp Leu Val Cys Tyr Ser Phe Gln Val Ala Arg Gly
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Met Glu Phe Leu Ala Ser Arg Lys Cys Ile His Arg Asp Leu Ala Ala 025 - 1035 - 1040

Arg Asn Ile Leu Leu Ser Glu Ser Asp Val Val Lys Ile Cys Asp Phe 1045 1050 1055

Gly Leu Ala Arg Asp Ile Tyr Lys Asp Pro Asp Tyr Val Arg Lys Gly
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Lys Val Tyr Thr Thr Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu 1090 1095 1100

Trp Glu Ile Phe Ser Leu Gly Ala Ser Pro Tyr Pro Gly Val Gln Ile 105 1110 1115 1120

Asn Glu Glu Phe Cys Gln Arg Val Arg Asp Gly Thr Arg Met Arg Ala 1125 1130 1135

Pro Glu Leu Ala Thr Pro Ala Ile Arg His Ile Met Leu Asn Cys Trp 1140 1145 1150

Ser Gly Asp Pro Lys Ala Arg Pro Ala Phe Ser Asp Leu Val Glu Ile 1155 1160 1165

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Cys Met Ala Pro Arg Ser Ser Gln Ser Ser Glu Glu Gly Ser Phe Ser 185 1190 1195 1200

Gln Val Ser Thr Met Ala Leu His Ile Ala Gln Ala Asp Ala Glu Asp 1205 1210 1215

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Phe Arg

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